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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,710	11/07/2000	Jeffrey A. Korn	1029-0100	9810

25263 7590 12/15/2003

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BILLERICA, MA 01821

EXAMINER

WANG, GEORGE Y

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

452

Office Action Summary	Application No. 09/707,710	Applicant(s) KORN ET AL.	
	Examiner George Y. Wang	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on October 23, 2003 has been entered.

Drawings

2. In order to avoid abandonment, the drawing informalities noted in Paper No. 6, mailed on March 18, 2002, must now be corrected. Correction can only be effected in the manner set forth in the above noted paper.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 6-8, 10, 12-13, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles (U.S. Patent No. 4,673,244) in view of Kuhara et al. (6,340,831, from hereinafter "Kuhara").

Miles discloses a process for manufacturing a semiconductor laser that requires installing the chip (fig. 4, ref. 120) in a package, inserting and securing a polarization-maintaining optical fiber through the ferrule and feedthrough (col. 3, lines 41-43), aligning the endface to the energized semiconductor chip (col. 4, lines 4-6) and detecting the polarization extinction ratio (PER) of light transmitted through the fiber from the semiconductor chip (fig. 3), and then axially rotating the endface of the fiber to maximize the PER through detection on a slow or fast path or axis (fig. 3). Miles also teaches a process of securing the fiber on the mounting structure by sealing around the fiber, before or after axial rotation adjustments (col. 5, lines 39-51).

However, Miles fails to specifically disclose installing a semiconductor chip in a package on a bench and securing an endface of the optical fiber to the bench.

Kuhara discloses semiconductor laser (fig. 18, ref. 70) with a semiconductor chip (col. 15, lines 61-66) on a bench (fig. 18, ref. 98) and securing an endface of the optical fiber (fig. 18, ref. 91) to the bench (col. 16, lines 1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have installed a semiconductor chip in a package on a bench and securing an endface of the optical fiber to the bench since one would be motivated to create a laser that is smaller in size and subsequently cheaper to manufacture (col. 16, lines 5-9). Moreover, such a method produces a device that is more suitable for long distance communication (col. 6, lines 33-35), has lower optical loss (col. 6, lines 35-38), and has easier handling for optical transmission (col. 8, lines 8-12).

5. Claims 9, 11, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles in view of Flanders (U.S. Patent No. 6,345,059).

Miles and Kuhara disclose a process for manufacturing a semiconductor laser as recited above. Miles teaches the use of a mounting structure to which the fiber endface is secured and where axial fiber rotation and PER maximization can be performed (fig. 3). However, the references do not specifically teach a mounting structure that is deformable.

Flanders discloses a deformable mounting structure (col. 4, lines 41-44) that enables active and passive alignment during system manufacture or calibration after an in-service period (col. 4, lines 41-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a deformable mounting structure since one would be motivated to further maximize PER during the process of manufacture of the semiconductor laser device (col. 4, lines 41-44). A deforming structure allows fibers that are already aligned and secured to be readjusted so that PER can be enhanced until a desired ratio level is reached (col. 4, lines 41-44). And this is important because, according to Miles, the level of optimally desired PER relates directly to the quality of the laser light that will emerge from the fiber. If the PER is optimized, even when the fiber is shortened, the light that is outputted will be high quality, linearly polarized light that is independent of fiber length and is therefore, highly useful for designed application (col. 5, lines 52-62).

Response to Arguments

6. Applicant's arguments with respect to claims 6-19 have been considered but are moot in view of the new ground(s) of rejection.

With regard to the new limitation requiring a "bench," it is clear that the Kuhara reference teaches this feature (see above Rejection). Therefore, Examiner maintains rejection.

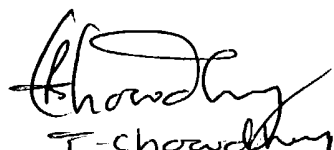
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 703-305-7242. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

gw
December 3, 2003


T-chowdhury
Primary Examiner